Anti-PCK1 antibody ab28455

Overview

Product name: Anti-PCK1 antibody
Description: Rabbit polyclonal to PCK1
Host species: Rabbit

Tested applications: Suitable for: IHC-P, ICC/IF, WB

Species reactivity: Reacts with: Mouse, Rat, Sheep, Human, Monkey
Predicted to work with: Rabbit, Horse, Chicken, Guinea pig, Cow, Cat, Dog, Pig, Caenorhabditis elegans

Immunogen: Synthetic peptide derived from within residues 330 - 379 of human PEP Carboxylase.

Positive control: Jurkat cell lysate, Human kidney

Properties

Form: Liquid

Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

Storage buffer: Preservative: 0.09% Sodium azide
Constituents: 2% Sucrose, PBS

Purity: Immunogen affinity purified

Clonality: Polyclonal

Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab28455 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<td>IHC-P</td>
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<td>Use at an assay dependent concentration.</td>
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<tr>
<td>ICC/IF</td>
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<td>Use a concentration of 5 µg/ml.</td>
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Function
Catalyzes the conversion of oxaloacetate (OAA) to phosphoenolpyruvate (PEP), the rate-limiting step in the metabolic pathway that produces glucose from lactate and other precursors derived from the citric acid cycle.

Tissue specificity
Major sites of expression are liver, kidney and adipocytes.

Pathway
Carbohydrate biosynthesis; gluconeogenesis.

Involvement in disease
Defects in PCK1 are the cause of cytosolic phosphoenolpyruvate carboxykinase deficiency (cytosolic PEPCK deficiency) [MIM:261680]. PEPCK deficiency is a metabolic disorder resulting from impaired gluconeogenesis. It is a rare disease with less than 10 cases reported in the literature. Clinical characteristics include hypotonia, hepatomegaly, failure to thrive, lactic acidosis and hypoglycemia. Autopsy reveals fatty infiltration of both the liver and kidneys. The disorder is transmitted as an autosomal recessive trait.

Sequence similarities
Belongs to the phosphoenolpyruvate carboxykinase [GTP] family.

Post-translational modifications
Acetylation is increased on addition of glucose and appears to regulate the protein stability.

Cellular localization
Cytoplasm.

Images
Western Blot using ab28455 at 1.0µg/ml. Sample type: Hum. Fetal Heart Lysate

Western blot - Anti-PCK1 antibody (ab28455)
Western Blot using ab28455 at 1.0ug/ml. Sample type: Hum. Fetal Liver Lysate

Western Blot using ab28455 at 1.0ug/ml. Sample type: Hum. Fetal Lung Lysate

Western Blot using ab28455 at 1.0ug/ml. Sample type: Hum. Fetal Muscle Lysate

Western Blot using ab28455 at 1.0ug/ml. Sample type: Human MCF7 cell Lysate
Western blot - Anti-PCK1 antibody (ab28455)

Western Blot using ab28455 at 1.0ug/ml. Sample type: Human Jurkat cell Lysate

Anti-PCK1 antibody (ab28455) at 1.25 µg/ml + Jurkat cell lysate

Secondary
HRP conjugated anti-Rabbit IgG diluted in 1:50,000-100,000

Predicted band size: 69 kDa

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCK1 antibody (ab28455)

Antibody concentration: 4 - 8 µg/ml Paraffin-embedded Tissue: Human Kidney Cells with positive label: Epithelial cells of renal tubule (indicated with arrows) Magnification: x400
ICC/IF image of ab28455 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab28455, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

Please note: All products are “FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE”

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